

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/001,737DATE: 10/06/98
TIME: 15:05:39

INPUT SET: S28966.raw

This Raw Listing contains the General
Information Section and up to the first 5 pages.

ENTERED

SEQUENCE LISTING

1
2
3 (1) General Information:
4
5 (i) APPLICANTS: Mizzen, Lee
6 Wisniewski, Jan
7
8 (ii) TITLE OF INVENTION: STREPTOCACCAL HEAT SHOCK PROTEINS OF THE
9 HSP60 FAMILY
10
11 (iii) NUMBER OF SEQUENCES: 91
12
13 (iv) CORRESPONDENCE ADDRESS:
14 (A) ADDRESSEE: SEED and BERRY LLP
15 (B) STREET: 701 Fifth Avenue, 6300 Columbia Center
16 (C) CITY: Seattle
17 (D) STATE: Washington
18 (E) COUNTRY: USA
19 (F) ZIP: 98104
20
21 (v) COMPUTER READABLE FORM:
22 (A) MEDIUM TYPE: Floppy disk
23 (B) COMPUTER: IBM PC compatible
24 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
25 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
26
27 (vi) CURRENT APPLICATION DATA:
28 (A) APPLICATION NUMBER: US 09/001,737
29 (B) FILING DATE: 31-DEC-1997
30 (C) CLASSIFICATION:
31
32 (viii) ATTORNEY/AGENT INFORMATION:
33 (A) NAME: Sharkey, Richard G.
34 (B) REGISTRATION NUMBER: 32,629
35 (C) REFERENCE/DOCKET NUMBER: 870109.408
36
37 (ix) TELECOMMUNICATION INFORMATION:
38 (A) TELEPHONE: (206) 622-4900
39 (B) TELEFAX: (206) 682-6031
40
41
42 (2) INFORMATION FOR SEQ ID NO:1:
43
44 (i) SEQUENCE CHARACTERISTICS:
45 (A) LENGTH: 1665 base pairs
46 (B) TYPE: nucleic acid

RAW SEQUENCE LISTING

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47      (C) STRANDEDNESS: single
48      (D) TOPOLOGY: linear
49
50
51
52      (ix) FEATURE:
53          (A) NAME/KEY: CDS
54          (B) LOCATION: 15..1649
55
56
57      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
58
59      GAATTCGGCT TCAT ATG GCG GCT AAA GAC GTA AAA TTC GGT AAC GAC GCT      50
60          Met Ala Ala Lys Asp Val Lys Phe Gly Asn Asp Ala
61              1              5              10
62
63      CGT GTG AAA ATG CTG CGC GGC GTA AAC GTA CTG GCA GAT GCA GTG AAA      98
64      Arg Val Lys Met Leu Arg Gly Val Asn Val Leu Ala Asp Ala Val Lys
65          15              20              25
66
67      GTT ACC CTC GGC CCA AAA GGC CGT AAC GTA GTT CTG GAT AAA TCT TTC      146
68      Val Thr Leu Gly Pro Lys Gly Arg Asn Val Val Leu Asp Lys Ser Phe
69          30              35              40
70
71      GGT GCA CCG ACC ATC ACT AAA GAT GGT GTT TCC GTA GCA CGT GAA ATC      194
72      Gly Ala Pro Thr Ile Thr Lys Asp Gly Val Ser Val Ala Arg Glu Ile
73          45              50              55              60
74
75      GAA CTG GAA GAC AAG TTC GAA AAC ATG GGT GCG CAG ATG GTG AAA GAA      242
76      Glu Leu Glu Asp Lys Phe Glu Asn Met Gly Ala Gln Met Val Lys Glu
77          65              70              75
78
79      GTT GCC TCT AAA GCG AAC GAC GCT GCA GGT GAC GGT ACC ACC ACC GCA      290
80      Val Ala Ser Lys Ala Asn Asp Ala Ala Gly Asp Gly Thr Thr Thr Ala
81          80              85              90
82
83      ACC GTA CTG GCT CAG TCC ATC ATC ACT GAA GGC CTG AAA GCC GTT GCT      338
84      Thr Val Leu Ala Gln Ser Ile Ile Thr Glu Gly Leu Lys Ala Val Ala
85          95              100              105
86
87      GCG GGC ATG AAC CCG ATG GAT CTG AAA CGT GGT ATC GAC AAA GCT GTC      386
88      Ala Gly Met Asn Pro Met Asp Leu Lys Arg Gly Ile Asp Lys Ala Val
89          110              115              120
90
91      GCT GCT GCT GTT GAA GAA CTG AAA GCA CTG TCC GTA CCG TGC TCC GAC      434
92      Ala Ala Ala Val Glu Glu Leu Lys Ala Leu Ser Val Pro Cys Ser Asp
93          125              130              135              140
94
95      TCT AAA GCT ATT GCT CAG GTT GGT ACC ATC TCC GCT AAC TCC GAC GAA      482
96      Ser Lys Ala Ile Ala Gln Val Gly Thr Ile Ser Ala Asn Ser Asp Glu
97          145              150              155
98
99      ACC GTA GGT AAA CTG ATC GCT GAA GCG ATG GAC AAA GTC GGT AAA GAA      530

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| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 100 | Thr | Val | Gly | Lys | Leu | Ile | Ala | Glu | Ala | Met | Asp | Lys | Val | Gly | Lys | Glu | |
| 101 | | | | 160 | | | | | 165 | | | | | 170 | | | |
| 102 | | | | | | | | | | | | | | | | | |
| 103 | GGC | GTG | ATC | ACC | GTT | GAA | GAC | GGT | ACC | GGT | CTG | CAG | GAC | GAA | CTG | GAC | 578 |
| 104 | Gly | Val | Ile | Thr | Val | Glu | Asp | Gly | Thr | Gly | Leu | Gln | Asp | Glu | Leu | Asp | |
| 105 | | | 175 | | | | | 180 | | | | | 185 | | | | |
| 106 | | | | | | | | | | | | | | | | | |
| 107 | GTG | GTT | GAA | GGT | ATG | CAG | TTC | GAC | CGT | GGC | TAC | CTG | TCT | CCT | TAC | TTC | 626 |
| 108 | Val | Val | Glu | Gly | Met | Gln | Phe | Asp | Arg | Gly | Tyr | Leu | Ser | Pro | Tyr | Phe | |
| 109 | | 190 | | | | | 195 | | | | | 200 | | | | | |
| 110 | | | | | | | | | | | | | | | | | |
| 111 | ATC | AAC | AAG | CCG | GAA | ACT | GGC | GCA | GTA | GAA | TTG | GAA | AGC | CCG | TTC | ATC | 674 |
| 112 | Ile | Asn | Lys | Pro | Glu | Thr | Gly | Ala | Val | Glu | Leu | Glu | Ser | Pro | Phe | Ile | |
| 113 | 205 | | | | | 210 | | | | | 215 | | | | | 220 | |
| 114 | | | | | | | | | | | | | | | | | |
| 115 | CTG | CTG | GCT | GAC | AAG | AAA | ATC | TCC | AAC | ATC | CGC | GAA | ATG | CTG | CCG | GTT | 722 |
| 116 | Leu | Leu | Ala | Asp | Lys | Lys | Ile | Ser | Asn | Ile | Arg | Glu | Met | Leu | Pro | Val | |
| 117 | | | | | 225 | | | | | 230 | | | | | 235 | | |
| 118 | | | | | | | | | | | | | | | | | |
| 119 | CTG | GAA | GCT | GTA | GCG | AAA | GCA | GGC | AAA | CCG | CTG | CTG | ATC | ATC | GCT | GAA | 770 |
| 120 | Leu | Glu | Ala | Val | Ala | Lys | Ala | Gly | Lys | Pro | Leu | Leu | Ile | Ile | Ala | Glu | |
| 121 | | | | 240 | | | | | 245 | | | | | 250 | | | |
| 122 | | | | | | | | | | | | | | | | | |
| 123 | GAT | GTT | GAA | GGC | GAA | GCG | CTG | GCA | ACT | CTG | GTT | GTT | AAC | ACC | ATG | CGC | 818 |
| 124 | Asp | Val | Glu | Gly | Glu | Ala | Leu | Ala | Thr | Leu | Val | Val | Asn | Thr | Met | Arg | |
| 125 | | | 255 | | | | | 260 | | | | | 265 | | | | |
| 126 | | | | | | | | | | | | | | | | | |
| 127 | GGT | ATC | GTA | AAA | GTC | GCT | GCG | GTT | AAA | GCA | CCT | GGC | TTC | GGC | GAT | CGT | 866 |
| 128 | Gly | Ile | Val | Lys | Val | Ala | Ala | Val | Lys | Ala | Pro | Gly | Phe | Gly | Asp | Arg | |
| 129 | | 270 | | | | | 275 | | | | | 280 | | | | | |
| 130 | | | | | | | | | | | | | | | | | |
| 131 | CGT | AAA | GCA | ATG | CTG | CAG | GAT | ATC | GCT | ACC | CTG | ACC | GGT | GGT | ACC | GTT | 914 |
| 132 | Arg | Lys | Ala | Met | Leu | Gln | Asp | Ile | Ala | Thr | Leu | Thr | Gly | Gly | Thr | Val | |
| 133 | 285 | | | | | 290 | | | | | 295 | | | | | 300 | |
| 134 | | | | | | | | | | | | | | | | | |
| 135 | ATC | TCT | GAA | GAG | ATC | GGT | ATG | GAG | CTG | GAA | AAA | GCA | ACT | CTG | GAA | GAT | 962 |
| 136 | Ile | Ser | Glu | Glu | Ile | Gly | Met | Glu | Leu | Glu | Lys | Ala | Thr | Leu | Glu | Asp | |
| 137 | | | | | 305 | | | | 310 | | | | | 315 | | | |
| 138 | | | | | | | | | | | | | | | | | |
| 139 | CTG | GGC | CAG | GCG | AAA | CGC | GTT | GTT | ATC | AAC | AAA | GAT | ACC | ACC | ACC | ATC | 1010 |
| 140 | Leu | Gly | Gln | Ala | Lys | Arg | Val | Val | Ile | Asn | Lys | Asp | Thr | Thr | Thr | Ile | |
| 141 | | | | 320 | | | | | 325 | | | | | 330 | | | |
| 142 | | | | | | | | | | | | | | | | | |
| 143 | ATC | GAT | GGC | GTG | GGC | GAC | GAA | GCT | GCA | ATC | CAG | GGT | CGC | GTG | ACT | CAG | 1058 |
| 144 | Ile | Asp | Gly | Val | Gly | Asp | Glu | Ala | Ala | Ile | Gln | Gly | Arg | Val | Thr | Gln | |
| 145 | | | 335 | | | | | 340 | | | | | 345 | | | | |
| 146 | | | | | | | | | | | | | | | | | |
| 147 | ATT | CGT | CAG | CAG | ATC | GAA | GAA | GCA | ACT | TCC | GAC | TAT | GAC | CGT | GAA | AAA | 1106 |
| 148 | Ile | Arg | Gln | Gln | Ile | Glu | Glu | Ala | Thr | Ser | Asp | Tyr | Asp | Arg | Glu | Lys | |
| 149 | | 350 | | | | | 355 | | | | | 360 | | | | | |
| 150 | | | | | | | | | | | | | | | | | |
| 151 | CTG | CAG | GAG | CGC | GTA | GCG | AAA | CTG | GCA | GGC | GGC | GTT | GCG | GTT | ATC | AAA | 1154 |
| 152 | Leu | Gln | Glu | Arg | Val | Ala | Lys | Leu | Ala | Gly | Gly | Val | Ala | Val | Ile | Lys | |

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|-----|---|-----|-----|-----|-----|--|-----|------|
| 153 | 365 | | 370 | | 375 | | 380 | |
| 154 | | | | | | | | |
| 155 | GTT GGT GCT GCG ACT GAA GTT GAA ATG AAA GAG AAG AAA GCC CGC GTT | | | | | | | 1202 |
| 156 | Val Gly Ala Ala Thr Glu Val Glu Met Lys Glu Lys Lys Ala Arg Val | | | | | | | |
| 157 | | 385 | | 390 | | | 395 | |
| 158 | | | | | | | | |
| 159 | GAA GAT GCC CTG CAC GCT ACC CGT GCT GCG GTA GAA GAA GGC GTG GTT | | | | | | | 1250 |
| 160 | Glu Asp Ala Leu His Ala Thr Arg Ala Ala Val Glu Glu Gly Val Val | | | | | | | |
| 161 | | 400 | | 405 | | | 410 | |
| 162 | | | | | | | | |
| 163 | GCT GGT GGT GGC GTT GCG CTG ATT CGC GTA GCG TCT AAA ATT GCC GGC | | | | | | | 1298 |
| 164 | Ala Gly Gly Gly Val Ala Leu Ile Arg Val Ala Ser Lys Ile Ala Gly | | | | | | | |
| 165 | | 415 | | 420 | | | 425 | |
| 166 | | | | | | | | |
| 167 | CTG AAA GGT CAG AAC GAA GAC CAG AAC GTA GGT ATC AAA GTT GCG CTG | | | | | | | 1346 |
| 168 | Leu Lys Gly Gln Asn Glu Asp Gln Asn Val Gly Ile Lys Val Ala Leu | | | | | | | |
| 169 | | 430 | | 435 | | | 440 | |
| 170 | | | | | | | | |
| 171 | CGC GCA ATG GAA TCC CCA CTG CGT CAA ATC GTA CTG AAC TGC GGC GAA | | | | | | | 1394 |
| 172 | Arg Ala Met Glu Ser Pro Leu Arg Gln Ile Val Leu Asn Cys Gly Glu | | | | | | | |
| 173 | | 445 | | 450 | | | 455 | 460 |
| 174 | | | | | | | | |
| 175 | GAG CCG TCT GTA GTG GCT AAC ACC GTG AAA GCC GGT GAC GGT AAC TAC | | | | | | | 1442 |
| 176 | Glu Pro Ser Val Val Ala Asn Thr Val Lys Ala Gly Asp Gly Asn Tyr | | | | | | | |
| 177 | | 465 | | 470 | | | 475 | |
| 178 | | | | | | | | |
| 179 | GGT TAC AAC GCT GCA ACT GAA GAA TAC GGC AAC ATG ATC GAC ATG GGT | | | | | | | 1490 |
| 180 | Gly Tyr Asn Ala Ala Thr Glu Glu Tyr Gly Asn Met Ile Asp Met Gly | | | | | | | |
| 181 | | 480 | | 485 | | | 490 | |
| 182 | | | | | | | | |
| 183 | ATC CTG GAT CCA ACC AAA GTA ACT CGT TCT GCT CTG CAG TAC GCG GCT | | | | | | | 1538 |
| 184 | Ile Leu Asp Pro Thr Lys Val Thr Arg Ser Ala Leu Gln Tyr Ala Ala | | | | | | | |
| 185 | | 495 | | 500 | | | 505 | |
| 186 | | | | | | | | |
| 187 | TCT GTT GCG GGT CTG ATG ATC ACC ACC GAG TGC ATG GTT ACC GAC CTG | | | | | | | 1586 |
| 188 | Ser Val Ala Gly Leu Met Ile Thr Thr Glu Cys Met Val Thr Asp Leu | | | | | | | |
| 189 | | 510 | | 515 | | | 520 | |
| 190 | | | | | | | | |
| 191 | CCG AAA GGC GAT GCA CCT GAC TTA GGT GCT GCT GGT GGT ATG GGC GGC | | | | | | | 1634 |
| 192 | Pro Lys Gly Asp Ala Pro Asp Leu Gly Ala Ala Gly Gly Met Gly Gly | | | | | | | |
| 193 | | 525 | | 530 | | | 535 | 540 |
| 194 | | | | | | | | |
| 195 | ATG GGC GGA ATG ATG TGATCAAGCC GAATTC | | | | | | | 1665 |
| 196 | Met Gly Gly Met Met | | | | | | | |
| 197 | | 545 | | | | | | |
| 198 | | | | | | | | |
| 199 | | | | | | | | |
| 200 | (2) INFORMATION FOR SEQ ID NO:2: | | | | | | | |
| 201 | | | | | | | | |
| 202 | (i) SEQUENCE CHARACTERISTICS: | | | | | | | |
| 203 | (A) LENGTH: 545 amino acids | | | | | | | |
| 204 | (B) TYPE: amino acid | | | | | | | |
| 205 | (D) TOPOLOGY: linear | | | | | | | |

RAW SEQUENCE LISTING PATENT APPLICATION *US/09/001,737*

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206
207      (ii) MOLECULE TYPE: protein
208
209      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
210
211 Met Ala Ala Lys Asp Val Lys Phe Gly Asn Asp Ala Arg Val Lys Met
212   1              5              10              15
213
214 Leu Arg Gly Val Asn Val Leu Ala Asp Ala Val Lys Val Thr Leu Gly
215              20              25              30
216
217 Pro Lys Gly Arg Asn Val Val Leu Asp Lys Ser Phe Gly Ala Pro Thr
218              35              40              45
219
220 Ile Thr Lys Asp Gly Val Ser Val Ala Arg Glu Ile Glu Leu Glu Asp
221   50              55              60
222
223 Lys Phe Glu Asn Met Gly Ala Gln Met Val Lys Glu Val Ala Ser Lys
224   65              70              75              80
225
226 Ala Asn Asp Ala Ala Gly Asp Gly Thr Thr Thr Ala Thr Val Leu Ala
227              85              90              95
228
229 Gln Ser Ile Ile Thr Glu Gly Leu Lys Ala Val Ala Ala Gly Met Asn
230              100             105             110
231
232 Pro Met Asp Leu Lys Arg Gly Ile Asp Lys Ala Val Ala Ala Ala Val
233              115             120             125
234
235 Glu Glu Leu Lys Ala Leu Ser Val Pro Cys Ser Asp Ser Lys Ala Ile
236   130             135             140
237
238 Ala Gln Val Gly Thr Ile Ser Ala Asn Ser Asp Glu Thr Val Gly Lys
239   145             150             155             160
240
241 Leu Ile Ala Glu Ala Met Asp Lys Val Gly Lys Glu Gly Val Ile Thr
242              165             170             175
243
244 Val Glu Asp Gly Thr Gly Leu Gln Asp Glu Leu Asp Val Val Glu Gly
245              180             185             190
246
247 Met Gln Phe Asp Arg Gly Tyr Leu Ser Pro Tyr Phe Ile Asn Lys Pro
248              195             200             205
249
250 Glu Thr Gly Ala Val Glu Leu Glu Ser Pro Phe Ile Leu Leu Ala Asp
251   210             215             220
252
253 Lys Lys Ile Ser Asn Ile Arg Glu Met Leu Pro Val Leu Glu Ala Val
254   225             230             235             240
255
256 Ala Lys Ala Gly Lys Pro Leu Leu Ile Ile Ala Glu Asp Val Glu Gly
257              245             250             255
258

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PAGE: 1

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION *US/09/001,737*

DATE: 10/06/98
TIME: 15:05:45

INPUT SET: S28966.raw

| Line | Error | Original Text |
|------|-------|---------------|
|------|-------|---------------|